Preface

The range of issues considered in graph drawing includes algorithms, graph theory, geometry, topology, order theory, graphic languages, perception, applications, and practical systems. Much research is motivated by applications to systems for viewing and interacting with graphs. The interaction between theoretical advances and implemented solutions is an important part of the graph drawing field. The annually organized graph drawing symposium is a forum for researchers, practitioners, developers, and users working on all aspects of graph visualization and representations. The preceding symposia were held in Montreal (GD'98), Rome (GD'97), Berkeley (GD'96), Passau (GD'95), Princeton (GD'94), and Paris (GD'93).

The Seventh International Symposium on Graph Drawing GD'99 was organized at Štiřín Castle, in the vicinity of Prague, Czech Republic. This baroque castle recently restored as a hotel and conference center provided a secluded place for the participants, who made good use of the working atmosphere of the conference. In total the symposium had 83 registered participants from 16 countries.

The program committee had a hard time choosing the accepted 38 contributions from the 59 submitted ones. Every paper was read by at least 4 program committee members, carefully evaluated, and the final decision was made after a strenuous e-mail discussion. The accepted papers show the field of graph drawing in its broadness and versatility, with contributions ranging from theoretical results on graph representations and theory of graph drawing algorithms to system demonstrations of graph drawing software and practical applications. The poster gallery included only two presentations this year, both presented in the proceedings.

All three invited speakers provide strong links to the Prague school of Discrete Mathematics. Jiřı Matoušek (Charles University, Prague) delivered a talk that showed a sample of techniques and tools used in designing geometric algorithms. Robin Thomas (Georgia Institute of Technology, Atlanta) presented a survey about planar graphs and related graph classes, including an overview of their recent computer aided re-proof of the Four Color Theorem. Both of these talks clearly showed the multiple connections of mathematics and practical computer science. Finally Jaroslav Nešetřil (Charles University, Prague), former advisor of both preceding speakers, presented a somewhat atypical talk. His multimedia show gave another dimension to the notion of 'drawing' and reflected the recent trends in the graph drawing area, where aesthethic criteria continue to play an increasingly important role.

The proceedings are structured to reflect the program of the conference. In particular, all three invited talks are illustrated in the proceedings either by reprints of the transparencies or by an extended abstract.

The graph drawing contest was again the center of interest for the participants. This contest serves to monitor and to challenge the state of the art in the area of graph drawing. A contest report is included in the proceedings. Thanks to Joe Marks for organizing the contest and taking the time to put together the comprehensive report.

As a novelty a special prize was awarded to the best student contribution. Six of the accepted submissions were co-authored solely by students, and the program committee voted the best among these. The winner was David Wood for his paper 'Multi-Dimensional Orthogonal Graph Drawing with Small Boxes'.

Apart from the professional program, the participants warmly accepted a conference concert `stivin@stirin` given by one of the best known contemporary Czech jazz musicians Jiří Stivín and rewarded his one hour performance with a long lasting applause.

GD'99 was organized and sponsored by DIMATIA Charles University. This recently established Center for Discrete Mathematics, Theoretical Computer Science and Applications fosters and coordinates research in Discrete Mathematics in the Czech Republic, and also has strong international links. The center organizes series of workshops and hosts both short term visitors and long term postdoc programs. For more information see its Web page

> `http://www.ms.mff.cuni.cz/acad/kam/dimatia/` .

Many people have contributed to the success of GD'99. First of all the authors, who submitted and presented high quality papers and system demonstrations. Program committee members invested a lot of their time into reading, evaluating, and selecting the accepted papers.

Thanks are due to all members of the organizing committee and to the volunteers (mostly students of Charles University). Special thanks to Jan Vondrák for organizing the poster gallery and to Vít Novák for making the computers and equipment ready when they were needed. But most special thanks are due to Jiří Fiala for managing the electronic submissions, collecting and proof-reading the accepted papers, and technically editing these proceedings, and to Anna Kotěšovcová from Conforg for excellent local organization. Without the help of these two special people the conference would have been just impossible.

Finally I want to thank the industrial sponsors for their financial or other help: Velké Popovice Brewery, Bohemia Glass, Sahm, Mitsubishi Electric Research Laboratory, AT&T Labs, and Tom Sawyer Software. The financial support from DIMATIA was partially made available by Czech Research grants GAČR 201/1999/0242 and Kontakt 1999/0338.

The coming Graph Drawing '00 will be organized by Joe Marks and Kathy Ryall in Williamsburg, Virginia, in September 2000.

September 1999   Jan Kratochvíl

Organization

GD'99 was organized by the

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